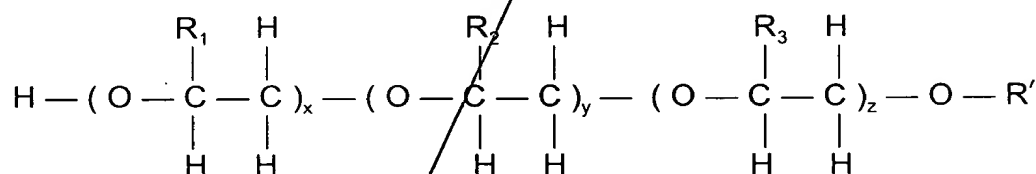


CLAIMS

What is claimed is:

1. A process for cleaning substrates comprising:
cleaning the substrates with an organic solvent; and
removing the organic solvent from the substrates using a pressurized fluid
solvent;

wherein the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

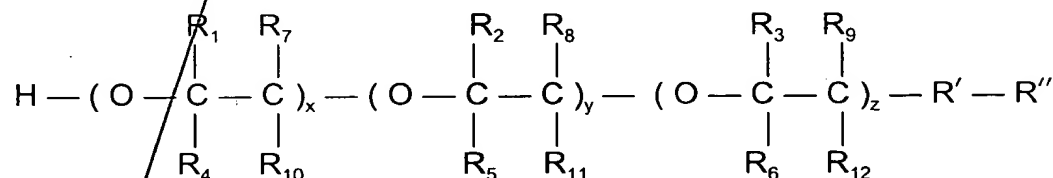
R' is C_jH_{2j+1} wherein j is an integer between one and (13-3(x+y+z)), inclusive;

and

R₁₋₃ are independently H or CH₃.

2. A process for cleaning substrates comprising:
cleaning the substrates with an organic solvent; and
removing the organic solvent from the substrates using a pressurized fluid
solvent;

wherein the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

R'' is benzyl, phenyl, partially or fully fluorinated benzyl or phenyl, C_jH_{2j+1}, or C_jH_aF_b wherein j is an integer between one and (13-3(x+y+z)), inclusive, a and b each is independently an integer between zero and 2j+1, inclusive, and a+b=2j+1;

Sub 1
R₁₋₁₂ are independently C_mH_nF_p or C_dH_eF_g where m is an integer between zero and two, inclusive, n and p are integers between zero and five, inclusive and n+p=2m+1, d is an integer between zero and two, inclusive, e and g are integers between zero and five, inclusive, and e+g =2d+1; and

R' is O, S, carbonyl or ester.

3. The process of claim 2 wherein:

R' is O;

R'' is C_jH_{2j+1};

R₁₋₃ are independently H or CH₃; and

R₄₋₁₂ each is H.

4. The process of claim 2 wherein:

R' is S, carbonyl or ester;

R'' is C_jH_{2j+1};

R₁₋₃ are independently H or CH₃; and

R₄₋₁₂ each is H.

5. The process of claim 2 wherein:

R' is O;

R'' is C_jH_{2j+1};

R₁₋₃ are independently H, CH₃, or C₂H₅; and

at least one of R₁₋₃ is CH₂CH₃; and

R₄₋₁₂ are each H.

6. The process of claim 2 wherein:

R' is S, carbonyl or ester;

R'' is C_jH_{2j+1};

R₁₋₃ are independently H, CH₃, or C₂H₅; and

at least one of R₁₋₃ is CH₂CH₃; and

R₄₋₁₂ are each H.

7. The process of claim 2 wherein:
R' is O;
R'' is C_jH_{2j+1};
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H or CH₃; and
at least one of R₁₀₋₁₂ is CH₃.
8. The process of claim 2 wherein:
R' is S, carbonyl or ester;
R'' is C_jH_{2j+1};
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H or CH₃; and
at least one of R₁₀₋₁₂ is CH₃.
9. The process of claim 2 wherein:
R' is O;
R'' is C_jH_{2j+1};
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H, CH₃, or C₂H₅; and
at least one of R₁₀₋₁₂ is CH₂CH₃.
10. The process of claim 2 wherein:
R' is S, carbonyl or ester;
R'' is C_jH_{2j+1};
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H, CH₃, or C₂H₅; and
at least one of R₁₀₋₁₂ is CH₂CH₃.

11. The process of claim 2 wherein:

R' is O;

R'' is $C_jH_aF_b$;

R_{1-3} are independently H, F, CH_3 , CH_2F , CHF_2 , or CF_3 ;

And at least one is CH_3 , CH_2F , CHF_2 , or CF_3 ; and

R_{4-12} are independently H or F.

12. The process of claim 2 wherein:

R' is S, carbonyl, or ester;

R'' is $C_jH_aF_b$;

R_{1-3} are independently H, F, CH_3 , CH_2F , CHF_2 , or CF_3 ;

And at least one is CH_3 , CH_2F , CHF_2 , or CF_3 ; and

R_{4-12} are independently H or F.

13. The process of claim 2 wherein:

R_{1-3} are independently $C_mH_nF_p$;

at least one of R_{1-3} is $C_2H_nF_p$;

R_{4-12} are independently H or F;

R' is O; and

R'' is $C_jH_aF_b$.

14. The process of claim 2 wherein:

R_{1-3} are independently $C_mH_nF_p$;

at least one of R_{1-3} is $C_2H_nF_p$;

R_{4-12} are independently H or F;

R' is S, carbonyl or ester; and

R'' is $C_jH_aF_b$.

15. The process of claim 2 wherein:
R₁₋₉ are independently H or F;
R₁₀₋₁₂ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃;
at least one of R₁₀₋₁₂ is CH₃, CH₂F, CHF₂ or CF₃;
R' is O; and
R'' is C_jH_aF_b.
16. The process of claim 2 wherein:
R₁₋₉ are independently H or F;
R₁₀₋₁₂ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃;
at least one of R₁₀₋₁₂ is CH₃, CH₂F, CHF₂ or CF₃;
R' is S, carbonyl or ester; and
R'' is C_jH_aF_b.
17. The process of claim 2 wherein:
R' is O;
R'' is C_jH_aF_b;
R₁₋₃ are independently C_mH_nF_p;
R₄₋₉ are independently H or F; and
R₁₀₋₁₂ are independently C_dH_eF_g.
18. The process of claim 2 wherein:
R' is S, carbonyl or ester;
R'' is C_jH_aF_b;
R₁₋₃ are independently C_mH_nF_p;
R₄₋₉ are independently H or F; and
R₁₀₋₁₂ are independently C_dH_eF_g.

19. The process of claim 2 wherein:
R' is O;
R'' is benzyl or phenyl;
R₁₋₃ are independently H, CH₃, or C₂H₅;
at least one of R₁₋₃ is CH₂CH₃; and
R₄₋₁₂ are each H.
20. The process of claim 2 wherein:
R' is S, carbonyl or ester;
R'' is benzyl or phenyl;
R₁₋₃ are independently H, CH₃, or C₂H₅;
at least one of R₁₋₃ is CH₂CH₃; and
R₄₋₁₂ are each H.
21. The process of claim 2 wherein:
R' is O;
R'' is benzyl or phenyl;
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H or CH₃; and
at least one of R₁₀₋₁₂ is CH₃.
22. The process of claim 2 wherein:
R' is S, carbonyl or ester;
R'' is benzyl or phenyl;
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H or CH₃; and
at least one of R₁₀₋₁₂ is CH₃.

23. The process of claim 2 wherein:
R' is O;
R'' is benzyl or phenyl;
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H, CH₃, or C₂H₅; and
at least one of R₁₀₋₁₂ is CH₂CH₃.
24. The process of claim 2 wherein:
R' is S, carbonyl or ester;
R'' is benzyl or phenyl;
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H, CH₃, or C₂H₅; and
at least one of R₁₀₋₁₂ is CH₂CH₃.
25. The process of claim 2 wherein:
R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;
R₁₋₃ are independently C_mH_nF_p;
at least one of R₁₋₃ is C₂H_nF_p;
R₄₋₁₂ are independently H or F; and
R' is O.
26. The process of claim 2 wherein:
R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;
R₁₋₃ are independently C_mH_nF_p;
at least one of R₁₋₃ is C₂H_nF_p;
R₄₋₁₂ are independently H or F; and
R' is S, carbonyl or ester.

27. The process of claim 2 wherein:

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;

R₁₋₉ are independently H or F;

R₁₀₋₁₂ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃;

at least one of R₁₀₋₁₂ is CH₃, CH₂F, CHF₂ or CF₃; and

R' is O.

28. The process of claim 2 wherein:

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;

R₁₋₉ are independently H or F;

R₁₀₋₁₂ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃;

at least one of R₁₀₋₁₂ is CH₃, CH₂F, CHF₂ or CF₃; and

R' is S, carbonyl or ester.

29. The process of claim 2 wherein:

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;

R₁₋₉ are independently H or F;

R₁₀₋₁₂ are independently C_mH_nF_p;

at least one of R₁₀₋₁₂ is C₂H_nF_p; and

R' is O.

30. The process of claim 2 wherein:

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;

R₁₋₉ are independently H or F;

R₁₀₋₁₂ are independently C_mH_nF_p;

at least one of R₁₀₋₁₂ is C₂H_nF_p; and

R' is S, carbonyl or ester.

31. The process of claim 2 wherein:

R' is O;

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;

R₁₋₃ are independently C_mH_nF_p;

R₄₋₉ are independently H or F; and

R₁₀₋₁₂ are independently C_dH_eF_g.

32. The process of claim 2 wherein:

R' is S, carbonyl or ester;

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;

R₁₋₃ are independently C_mH_nF_p;

R₄₋₉ are independently H or F; and

R₁₀₋₁₂ are independently C_dH_eF_g.

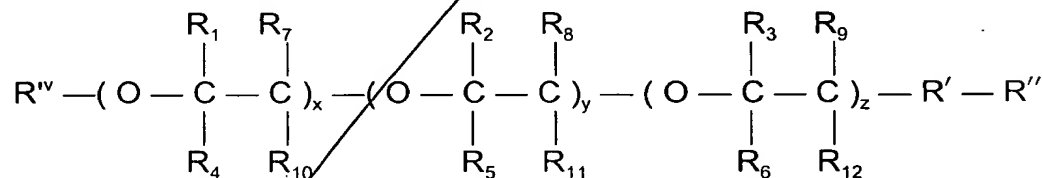
33. A process for cleaning substrates comprising:

cleaning the substrates with an organic solvent; and

removing the organic solvent from the substrates using a pressurized fluid

solvent;

wherein the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

R'' is C_jH_uF_v and R^{IV} is C_kH_rF_s wherein j and k are each an integer between one and (13-3(x+y+z)), inclusive, and j+k is an integer between two and (13-3(x+y+z)), inclusive, u and v are each an integer between zero and 2j+1, inclusive,

and $u+v=2j+1$, and r and s are each an integer between zero and $2k+1$, inclusive, and $r+s=2k+1$;

R_{1-3} and R_{10-12} are independently $C_mH_nF_p$, where m is an integer between zero and two, inclusive, n and p are integers between zero and five, inclusive and $n+p=2m+1$;

R_{4-9} are independently H, F or CH_3 ; and
 R' is O, S, carbonyl or ester.

34. The process of claim 33 wherein:

R' is O;

R'' is C_jH_{2j+1} ;

R^{IV} is C_kH_{2k+1} ;

R_{1-3} are independently H or CH_3 ; and

R_{4-12} are each H.

35. The process of claim 33 wherein:

R' is S, carbonyl or ester;

R'' is C_jH_{2j+1} ;

R^{IV} is C_kH_{2k+1} ;

R_{1-3} are independently H or CH_3 ; and

R_{4-12} are each H.

36. The process of claim 33 wherein:

R' is O;

R'' is C_jH_{2j+1} ;

R^{IV} is C_kH_{2k+1} ;

R_{1-3} are independently H, CH_3 , or C_2H_5 ;

at least one of R_{1-3} is CH_2CH_3 ; and

R_{4-12} are each H.

37. The process of claim 33 wherein:
R' is S, carbonyl or ester;
R'' is C_jH_{2j+1} ;
R^{IV} is C_kH_{2k+1} ;
R₁₋₃ are independently H, CH₃, or C₂H₅;
at least one of R₁₋₃ is CH₂CH₃; and
R₄₋₁₂ are each H.
38. The process of claim 33 wherein:
R' is O;
R'' is C_jH_{2j+1} ;
R^{IV} is C_kH_{2k+1} ;
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H or CH₃; and
at least one of R₁₀₋₁₂ is CH₃.
39. The process of claim 33 wherein:
R' is S, carbonyl or ester;
R'' is C_jH_{2j+1} ;
R^{IV} is C_kH_{2k+1} ;
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H or CH₃; and
at least one of R₁₀₋₁₂ is CH₃.
40. The process of claim 33 wherein:
R' is O;
R'' is C_jH_{2j+1} ;
R^{IV} is C_kH_{2k+1} ;
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H, CH₃, or C₂H₅; and
at least one of R₁₀₋₁₂ is CH₂CH₃.

41. The process of claim 33 wherein:
R' is S, carbonyl or ester;
R'' is C_jH_{2j+1} ;
R^{IV} is C_kH_{2k+1} ;
R₁₋₉ are each H;
R₁₀₋₁₂ are independently H, CH₃, or C₂H₅; and
at least one of R₁₀₋₁₂ is CH₂CH₃.

42. The process of claim 33 wherein:
R₁₋₃ are independently H, F, CH₃, CH₂F, CHF₂, or CF₃;
R₄₋₁₂ are independently H or F; and
R' is O.

43. The process of claim 33 wherein:
R₁₋₃ are independently H, F, CH₃, CH₂F, CHF₂, or CF₃;
R₄₋₁₂ are independently H or F; and
R' is S, carbonyl or ester.

44. The process of claim 33 wherein:
at least one of R₁₋₃ is C₂H_nF_p;
R₄₋₁₂ are each independently H or F; and
R' is O.

45. The process of claim 33 wherein:
at least one of R₁₋₃ is C₂H_nF_p;
R₄₋₁₂ are each independently H or F; and
R' is S, carbonyl or ester.

Sub 37
5

46. The process of claim 33 wherein:
R₁₋₉ are independently H or F;
R₁₀₋₁₂ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃;
at least one of R₁₀₋₁₂ is CH₃, CH₂F, CHF₂ or CF₃; and
R' is O.

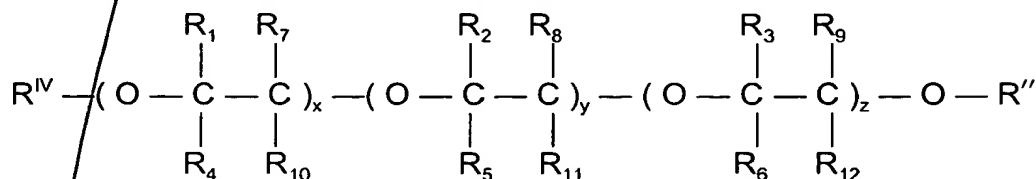
47. The process of claim 33 wherein:
R₁₋₉ are independently H or F;
R₁₀₋₁₂ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃;
at least one of R₁₀₋₁₂ is CH₃, CH₂F, CHF₂ or CF₃; and
R' is S, carbonyl or ester.

48. The process of claim 33 wherein:
R₁₋₉ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃;
at least one of R₁₀₋₁₂ is C₂H_nF_p; and
R' is O.

49. The process of claim 33 wherein:
R₁₋₉ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃;
at least one of R₁₀₋₁₂ is C₂H_nF_p; and
R' is S, carbonyl or ester.

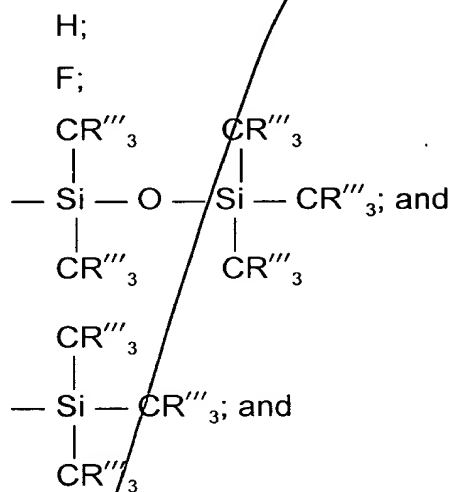
50. A process for cleaning substrates comprising:
cleaning the substrates with an organic solvent; and
removing the organic solvent from the substrates using a pressurized fluid
solvent;

wherein the organic solvent is of the structural formula:



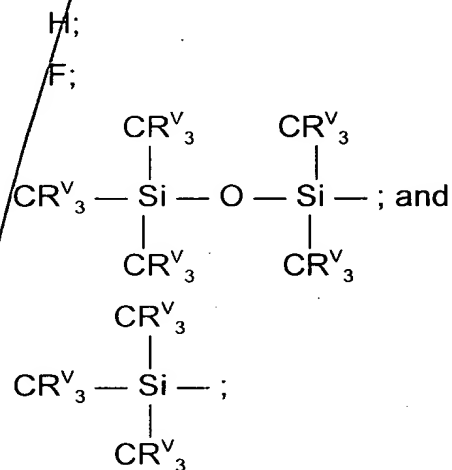
wherein x, y, and z are each zero or one,
at least one of x, y, and z is one;

R'' is selected from the group including:



wherein R''' is H, F or combinations of H and F;

R^{IV} is selected from the group including:



wherein R^V is H, F or combinations of H and F; and

when R'' is H or F, R^{IV} is not H or F.

R₁₋₃ are independently H, F, CH₃, CH₂F, CHF₂ or CF₃; and

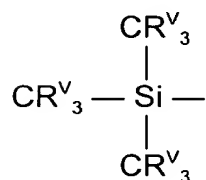
R₄₋₁₂ are independently H or F.

51. The process of claim 50 wherein:

R^V is:

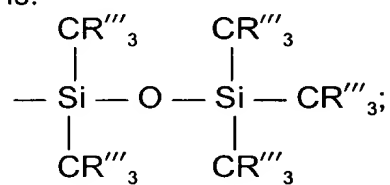
H

or



wherein R^V is H, F or combinations of H and F; and

R'' is:



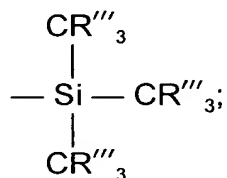
wherein R''' is H, F or combinations of H and F.

52. The process of claim 50 wherein:

R'' is:

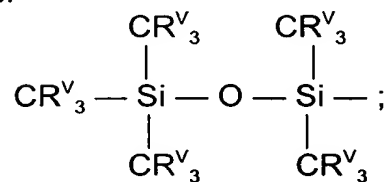
H

or



wherein R''' is H, F or combinations of H and F; and

R^V is:



wherein R^V is H, F or combinations of H and F.

53. The process of claim 50 wherein:

R'' is:

H;

F; or

CR'''₃

— Si — CR''₃;

CR'''₃

wherein R''' is H, F or combinations of H and F; and

R^{IV} is:

H;

F; or

CR^V₃

CR^V₃ — Si —

CR^V₃

wherein R^V is H, F or combinations of H and F; and

when R'' is H or F, R^{IV} is not H or F.

54. The process of claim 50 wherein:

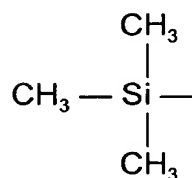
R₁₋₃ are independently H or CH₃;

R₄₋₁₂ are each H;

R^{IV} is:

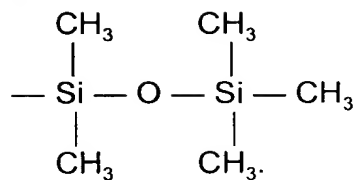
H

or



and

R'' is:



55. The process of claim 50 wherein:

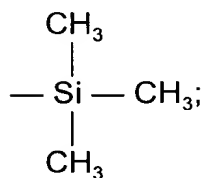
R₁₋₃ are independently H or CH₃;

R₄₋₁₂ are each H;

R'' is:

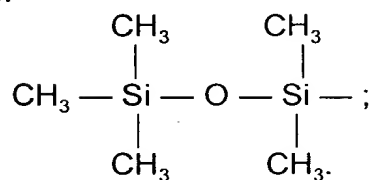
H

or



and

R^{IV} is:



56. The process of claim 50 wherein:

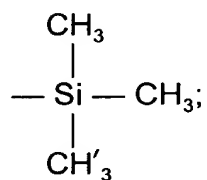
R₁₋₃ are independently H or CH₃;

R₄₋₁₂ are each H;

R'' is:

H;

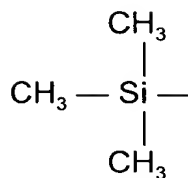
or



R^{IV} is:

H;

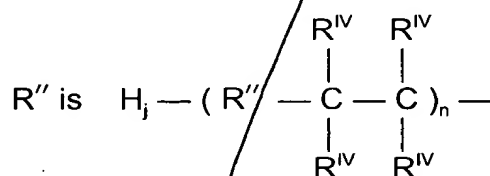
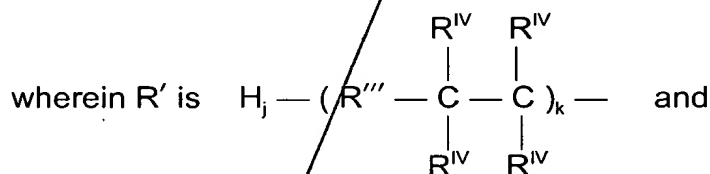
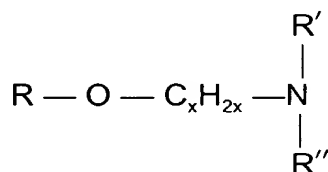
or



and when R'' is H, R^{IV} is not H.

Subas 57. A process for cleaning substrates comprising:
cleaning the substrates with an organic solvent; and
removing the organic solvent from the substrates using a pressurized fluid
solvent;

wherein the organic solvent is of the structural formula:



wherein R''' is O and j is 1 or R''' is N and j is 2;

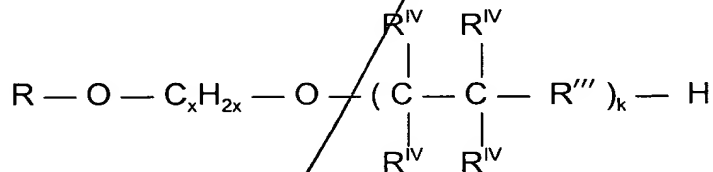
n is an integer between zero and two;

R^{IV} are each independently H, CH₃ or CH₂CH₃ and k is an integer
between zero and two inclusive; and

wherein R is C_yH_{2y+1} and y is an integer between one and (12 - (3k+3n+x))
inclusive, and x is an integer between one and (12-(3k+y)), inclusive.

58. A process for cleaning substrates comprising:
cleaning the substrates with an organic solvent; and
removing the organic solvent from the substrates using a pressurized fluid
5 solvent;

wherein the organic solvent is of the structural formula:



wherein R''' is O and j is 1 or R''' is N and j is 2;

R^{IV} are each independently H, CH₃ or CH₂CH₃ and k is an integer between
zero and two inclusive; and

wherein R is C_yH_{2y+1} and y is an integer between one and (12- (3k+x))
inclusive, and x is an integer between one and (12-(3k+y)), inclusive.

add C6